

AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior listings, and all prior versions, of claims in the application.

LISTING OF CLAIMS:

1. (Currently Amended) An ultrasonic diagnostic apparatus comprising:
 - a probe that transmits/receives ultrasonic waves to/from a test subject;
 - a transmitting section that supplies a drive signal to the probe;
 - a receiving section that receives a reflection echo signal outputted from the probe;
 - an image constructing section that reconstructs a diagnostic image on the basis of the received reflection echo signal;
 - a display section that displays the diagnostic image constructed by the image constructing section; and
 - a control section that controls these sections,
 - wherein the ultrasonic diagnostic apparatus includes a judging section that judges configured to judge, on the basis of the diagnostic image information which is reconstructed from the image constructing section when the probe transmits/receives ultrasonic waves, that the probe is left in the air, and when the judging unit judges that the probe is left in the air, the control section controls the drive signals supplied to the probe from the transmitting section so as to suppress a rise in the temperature of the probe, and the control section reduces reduce the frame rate to a value that is lower than the present frame rate but in a range sufficient for moving image reproduction of the diagnostic image.

2. (Original) The ultrasonic diagnostic apparatus of claim 1, wherein the judging section includes at least one of a B image judging unit that judges on the basis of a B image, a Doppler signal judging unit that judges on the basis of a Doppler signal, and a CFM judging unit that judges on the basis of a CFM image.

3. – 5. (Cancelled).

6. (Original) The ultrasonic diagnostic apparatus of claim 2, further comprising switching means that switches between the B image judging unit, the Doppler signal judging unit, and the CFM judging unit, wherein the switching means switches at desired time intervals.

7. (Cancelled).

8. (Original) The ultrasonic diagnostic apparatus of claim 1, wherein when the control section judges that the probe is left in the air, the control section stops the drive signal supplied to the probe from the transmitting section or reduces the energy of the drive signal to be equal to or less than a set value.

9. – 11. (Cancelled).

12. (Presently Presented) The ultrasonic diagnostic apparatus of claim 8, wherein the control section returns the energy of the drive signal supplied to the probe from the transmitting section, or the frame rate, to its original status on the

basis of a command from an operation section, and transmits the ultrasonic waves to the test subject from the probe.

13. – 15. (Cancelled).

16. (Previously Presented) The ultrasonic diagnostic apparatus of claim 8, wherein the control section that generates a message representing the period of time until the energy of the drive signal supplied to the probe from the transmitting section is reduced to be equal to or less than the set value, and displays the generated message on the display section.

17. (Previously Presented) The ultrasonic diagnostic apparatus of claim 16, wherein the message is information giving notification of the period of time until the ultrasonic waves transmitted from the probe are stopped, the period of time until the image quality of the diagnostic image changes, or the period of time until the frame rate of the diagnostic image is reduced.

18. (Previously Presented) The ultrasonic diagnostic apparatus of claim 16, wherein the message is displayed while the display size, the display color, or other display aspects of the message change over time.

19. (Currently Amended) An ultrasonic diagnostic apparatus comprising:
a probe that transmits/receives ultrasonic waves to/from a test subject;
a transmitting section that supplies a drive signal to the probe;

a receiving section that receives a reflection echo signal outputted from the probe;

an image constructing section that reconstructs a diagnostic image on the basis of the received reflection echo signal;

a display section that displays the diagnostic image constructed by the image constructing section; and

a control section that controls these sections wherein the ultrasonic diagnostic apparatus includes a judging section that judgesconfigured to judge, on the basis of brightness information which is reconstructed from the image constructing section when the probe transmits/receives ultrasonic waves, that the probe is left in the air, and when the judging unit judges that the probe is left in the air, the control section suppresses the quantity of the drive signals supplied to the probe from the transmitting section, and the control section reduces the frame rate to a value that is lower than the present frame rate but in a range sufficient for moving image reproduction of the diagnostic image.

20. (Previously Presented) The ultrasonic diagnostic apparatus of claim 19, wherein the judging section judges on the basis of the size of computed variance from the brightness information at the same coordinates in the plurality of frames and a preset threshold.

21. (Currently Amended) An ultrasonic diagnostic apparatus comprising:
a probe that transmits/receives ultrasonic waves to/from a test subject;
a transmitting section that supplies a drive signal to the probe;

a receiving section that receives a reflection echo signal outputted from the probe;

an image constructing section that reconstructs a diagnostic image on the basis of the received reflection echo signal;

a display section that displays the diagnostic image constructed by the image constructing section; and

a control section that controls these section, wherein the ultrasonic diagnostic apparatus includes a judging section that judgesconfigured to judge, on the basis of a Doppler signal information which is reconstructed from the image constructing section when the probe transmits/receives ultrasonic waves, that the probe is left in the air, and when the judging unit judges that the probe is left in the air, the control section suppresses the quantity of the drive signals supplied to the probe from the transmitting section, and the control section reduces the frame rate to a value that is lower than the present frame rate but in a range sufficient for moving image reproduction of the diagnostic image.

22. (Previously Presented) The ultrasonic diagnostic apparatus of claim 21, wherein the judging section that judges on the basis of the size of computed variance from the Doppler signal information at the same coordinates in the plurality of frames and a preset threshold.

23. (Currently Amended) An ultrasonic diagnostic apparatus comprising:

a probe that transmits/receives ultrasonic waves to/from a test subject;
a transmitting section that supplies a drive signal to the probe;

a receiving section that receives a reflection echo signal outputted from the probe;

an image constructing section that reconstructs a diagnostic image on the basis of the received reflection echo signal;

a display section that displays the diagnostic image constructed by the image constructing section; and

a control section that controls these section, wherein the ultrasonic diagnostic apparatus includes a judging section that judgesconfigured to judge, on the basis of a CFM image information which is reconstructed from the image constructing section when the probe transmits/receives ultrasonic waves, that the probe is left in the air, and when the judging unit judges that the probe is left in the air, the control section suppresses the quantity of the drive signals supplied to the probe from the transmitting section, and the control section reduces the frame rate to a value that is lower than the present frame rate but in a range sufficient for moving image reproduction of the diagnostic image.

24. (Previously Presented) The ultrasonic diagnostic apparatus of claim 23, wherein the judging section that judges on the basis of the size of computed variance from the CFM image information at the same coordinates in the plurality of frames and a preset threshold.